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STEM CELL FACTOR COMPOSITIONS  
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2/17/04  
See amdt 11/13/03

This is a continuation-in-part application of  
Serial No. 589,701, filed October 1, 1990 which is a  
5 continuation-in-part application of Ser. No. 573,616  
filed August 24, 1990 which is a continuation-in-part  
application of Ser. No. 537,198 filed June 11, 1990  
which is a continuation-in-part application of Ser. No.  
422,383 filed October 16, 1989 hereby incorporated by  
10 reference.

The present invention relates in general to  
novel factors which stimulate primitive progenitor cells  
including early hematopoietic progenitor cells, and to  
DNA sequences encoding such factors. In particular, the  
15 invention relates to these novel factors, to fragments  
and polypeptide analogs thereof and to DNA sequences  
encoding the same.

Background of the Invention

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The human blood-forming (hematopoietic) system  
is comprised of a variety of white blood cells  
(including neutrophils, macrophages, basophils, mast  
cells, eosinophils, T and B cells), red blood cells  
25 (erythrocytes) and clot-forming cells (megakaryocytes,  
platelets),

It is believed that small amounts of certain  
hematopoietic growth factors account for the  
differentiation of a small number of "stem cells" into a  
30 variety of blood cell progenitors for the tremendous  
proliferation of those cells, and for the ultimate  
differentiation of mature blood cells from those  
lines. The hematopoietic regenerative system functions  
well under normal conditions. However, when stressed by  
35 chemotherapy, radiation, or natural myelodysplastic  
disorders, a resulting period during which patients are